Operating Instructions

for use by heating contractor

Vitotronic 300
Type GW6B
Single boiler system or multi boiler system with
Weather-compensated control unit

VITOTRONIC® 300

Certified as a component part for Viessmann boilers

IMPORTANT

Read and save these instructions for future reference.

5513 464 - 03 01/2015

Please file in Service Binder

Safety, Installation and Warranty Requirements

Please ensure that these instructions are read and understood before commencing installation. Failure to comply with the instructions listed below and details printed in this manual can cause product/property damage, severe personal injury, and/or loss of life. Ensure all requirements below are understood and fulfilled (including detailed information found in manual subsections).

- **Product documentation**
  Read all applicable documentation before commencing installation. Store documentation near boiler in a readily accessible location for reference in the future by service personnel.

  ▶*For a listing of applicable literature, please see section entitled "Important Regulatory and Safety Requirements".*

- **Warranty**
  Information contained in this and related product documentation must be read and followed. Failure to do so renders the warranty null and void.

- **Licensed professional heating contractor**
  The installation, adjustment, service and maintenance of this equipment must be performed by a licensed professional heating contractor.

  ▶*Please see section entitled "Important Regulatory and Installation Requirements".*

- **Advice to owner**
  Once the installation work is complete, the heating contractor must familiarize the system operator/ ultimate owner with all equipment, as well as safety precautions/requirements, shutdown procedure, and the need for professional service annually before the heating season begins.

⚠ WARNING

Installers must follow local regulations with respect to installation of carbon monoxide detectors. Follow the Viessmann maintenance schedule of the boiler contained in this manual.

Operating and Service Documentation

It is recommended that all product documentation such as parts lists, operating and service instructions be handed over to the system user for storage. Documentation is to be stored near boiler in a readily accessible location for reference by service personnel.

- **Carbon monoxide**
  Improper installation, adjustment, service and/or maintenance can cause flue products to flow into living space. Flue products contain poisonous carbon monoxide gas.

  ▶*For information pertaining to the proper installation, adjustment, service and maintenance of this equipment to avoid formation of carbon monoxide, please see subsection entitled "Mechanical room" and "Venting requirements" in the "Installation Instructions".*

- **Fresh air**
  This equipment requires fresh air for safe operation and must be installed ensuring provisions for adequate combustion and ventilation air exist.

  ▶*For information pertaining to the fresh air requirements of this product, please see subsection entitled "Mechanical room" in the "Installation Instructions".*

- **Equipment venting**
  Never operate boiler without an installed venting system. An improper venting system can cause carbon monoxide poisoning.

  ▶*For information pertaining to venting and chimney requirements, please see section entitled "Venting Connection". All products of combustion must be safely vented to the outdoors.*

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About these Instructions

Take note of all symbols and notations intended to draw attention to potential hazards or important product information. These include "WARNING", "CAUTION", and "IMPORTANT". See below.

WARNING

Indicates an imminently hazardous situation which, if not avoided, could result in loss of life, serious injury or substantial product/property damage.

▶ *Warnings draw your attention to the presence of potential hazards or important product information.*

CAUTION

Indicates an imminently hazardous situation which, if not avoided, may result in minor injury or product/ property damage.

▶ *Cautions draw your attention to the presence of potential hazards or important product information.*

IMPORTANT

▶ *Helpful hints for installation, operation or maintenance which pertain to the product.*

▶

▶ *This symbol indicates that additional, pertinent information is to be found.*

▶ *This symbol indicates that other instructions must be referenced.*

For your Safety *(continued)*

⚠ CAUTION

Follow these safety instructions closely to avoid the risk of injury and damage to property.

- **Operation**
  Before operating the boiler, make sure you fully understand its method of operation. Your heating contractor should always perform the initial start-up and explain the system. Any warranty is null and void if these instructions are not followed.
- **Flue gas smell**
  - Deactivate heating equipment.
  - Open windows and doors.
  - Inform your heating contractor.
- **Working on the equipment**
  All personnel working on the equipment or the heating system must have the proper qualifications and hold all necessary licenses. Ensure main power to equipment, heating system, and all external controls has been deactivated. Close main gas supply valve. Take precautions in all instances to avoid accidental activation of power during service work.
- **Dangerous conditions**
  - Deactivate main power immediately.
  - Close gas supply valve.
- **Maintenance and cleaning**
  Regular inspection and service by a qualified heating contractor is important to the performance of the boiler. Neglected maintenance impacts on warranty; regular inspection ensures clean, environmentally friendly and efficient operation. We recommend a maintenance contract with a qualified heating contractor.
- **Technical Data Manual**
  - Installation Instruction and Service Instructions
  - Operating Instructions and User's Information Manual

Additional applicable literature:
- Accessory manuals

If you smell gas

- Don't smoke! Don't use naked flames or cause sparks (e.g. by switching lights or electrical appliances on and off)
- Open windows and doors
- Close the gas shut-off valve
- Inform your heating engineers/service contractors from outside the building
- Observe the safety regulations of your gas supply company (see gas meter) and those of your heating engineers (see start-up or instruction report).

In emergencies

- Immediately switch off the power supply, e.g. at the separate fuse or power supply disconnect switch (unless there is a smell of gas).
- Close the shut-off valves in the oil pipes or close the gas shut-off valve, whichever applicable.
- Use suitable extinguishers in the event of fire.

Installation of additional components

The installation of additional components which have not been tested together with the boiler can adversely affect the function and performance of the boiler.
Our warranty does not cover and we accept no liability for damage attributable to the installation of such components.

Boiler room conditions

- Do not use a room in which the air is polluted by halogenated hydro-carbons (e.g. as contained in aerosols, paints, solvents and cleaning agents)
- Do not use a room subject to high levels of dust
- Do not use a room subject to permanently high humidity
- The room should be frost-protected
- Max. ambient temperature 95°F (35°C).
- Provide good ventilation and do not close or obstruct vents (if installed).

This symbol indicates a reference to other instructions which must be observed.

Commissioning

The commissioning and matching of the control unit to local conditions and building characteristics, as well as instructing the user in the operation of the system, must be carried out by your heating contractor.

As the user of new combustion equipment, you may be obliged to notify your local service technician of the installation [check local regulations]. Your local service technician will also inform you [where appropriate] about work he may be required to perform on your combustion equipment (e.g. regular checks, cleaning).

Your System is Preset at the Factory

The Vitotronic 300 GW6B control comes shipped with factory default settings that ensure secure operation and provides basic operating functions. Upon powering up the Vitocrossal 200 CM2 boiler and burner may be initially commissioned or temporarily operated with the factory default values. It is recommended that the commissioning process is completed with either the 'Commissioning Assistant' (refer to the installation/service instructions on 'Commissioning the System') or through 'System Configuration' in the service menu (refer to the installation/service instructions on 'calling up the service menu').

Your heating system is preset at the factory and is therefore ready for operation:

Central heating

- Between 00:00 and 24:00 h, the rooms are heated to 68°F (20°C) "Room temp set point" (standard room temperature).

DHW heating

- Between 00:00 and 24:00 h DHW will be heated to 122°F (50°C) "DHW temperature setpoint".
  Any installed DHW recirculation pump is switched on.

Frost protection

- Your boiler and DHW tank are protected against frost.

Daylight savings time

- This changeover is automatic.

Date and time

- The date and time were set by your heating contractor.

You can change these settings at any time to suit your individual requirements.

Power failure
All settings are saved if there is a power failure.

Energy Saving Tips

Central heating

- Standard room temperature
  ("Room temp target"):
  Never overheat your home. Every degree of room temperature reduction saves up to 6% on your heating bills. Never set your standard room temperature higher than 68°F (20°C).
- Time program:
  Heat your home to the standard room temperature during the day and the reduced temperature at night. Set the time program for this.
- Operating program:
  If you do not require central heating, select one of the following operating programs:
  – "DHW only":
  If you require no heating for your home in summer, but you need hot water.
  – "Standby mode":
  If you don't need to heat your home and don't need hot water for long periods.
- Short absence:
  Reduce the room temperature if you are going out shopping, for example. For this, select "Economy mode".
- Holiday:
  If you are going away, select the "Holiday program": The room temperature will be reduced, and DHW heating will be turned off.
- Ventilation:
  Close the thermostatic valves when ventilating. Open the windows fully for a brief time.
- Roller shutters:
  Close roller shutters (if installed) at dusk.
- Thermostatic valves:
  Ensure that thermostatic valves are properly adjusted.
- Radiators:
  Never cover radiators or thermostatic valves.

DHW heating

- DHW recirculation pump:
  Only activate the DHW recirculation pump for periods in which DHW is regularly drawn off. Set the time program for this.
- DHW consumption:
  Consider showering instead of running a bath. A shower generally uses less energy than a full bath.

For additional energy saving functions of the Vitotronic control unit, please contact your heating contractor.

Tips for Greater Comfort

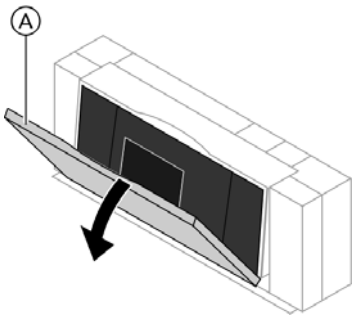
Central heating

- Standard room temperature
  ("Room temp set point"):
  You can select your individual preferred temperature at any time in the standard menu.
- Time program:
  Make use of the time program. In the time program, you can set time phases with different room temperatures, for example different temperatures for day and night time.
- Heating curve:
  The heating curve enables you to individually adjust the heating system to the actual heat demand in your home.
  If set correctly, your preferred temperature will be achieved all year round.
- "Comfort mode":
  Select "Comfort mode" if you want to heat your interior at a temperature that deviates from that in a time program.
  Example: Late in the evening, the reduced room temperature is set by the time program.
  Your guests stay longer.

DHW heating

- Time program:
  Make use of the time program.

Opening the Vitotronic 300



The programming unit is located behind cover flap Ⓐ.

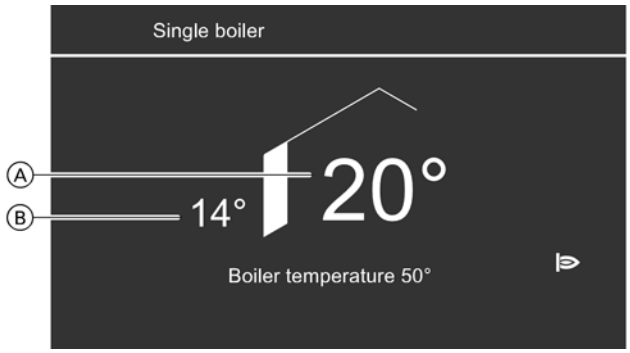
To open, pull the top edge of the hinged cover forward.

General Information

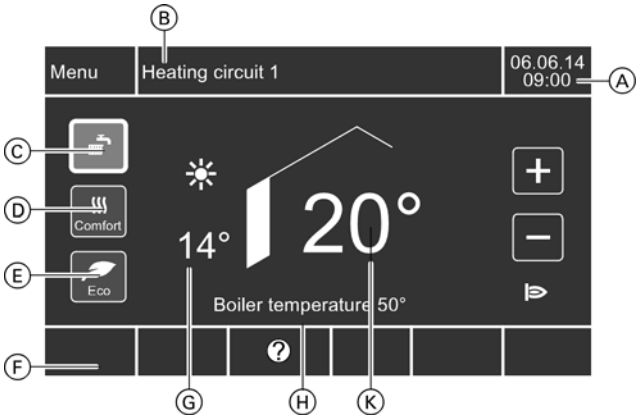
Each boiler is equipped with its own control unit.
In a multi boiler system only one control unit takes on the function of boiler and heating circuit control unit and that of the higher weather-compensated cascade control unit. This is referred to in the following as the Cascade control unit.

The display shows “Lead boiler + cascade”.
The other control units take on the function of a boiler control unit for constant temperature operation. This is referred to in the following as the Lag boiler control unit.

Programming Unit



Legend
Ⓐ Set room temperature
Ⓑ Current outdoor temperature



Legend
Ⓐ Header
Ⓑ Select heating circuit 1, 2 or 3
Ⓒ Operating program
Ⓓ Comfort mode
Ⓔ Economy mode
Ⓕ Footer
Ⓖ Current outdoor temperature
Ⓗ Information line
Ⓚ Set room temperature for the heating circuit selected in the header

You can change any settings on your heating system centrally at the programming unit of the Vitotronic control unit.
If remote control units are installed in your rooms, you can also adjust the settings at the remote control units.
2 control levels are available:

- Home screen
- The main menu: See page 11

See the Remote Control Operating Instructions.

A screensaver appears after opening the control unit, or if there has not been any operation for some time:
Each programming unit is equipped with a touchscreen. To make adjustments and scan information, tap the on-screen buttons.

Home screen

You can scan and adjust the settings you use most frequently from the home screen:

- Set room temperature
- Operating program
- Comfort mode
- Economy mode

To return to the home screen:

- Screensaver is active:
  Tap the display anywhere.
- From anywhere in the menu tap .

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Programming Unit *(continued)*

Home screen *(continued)*

Symbols and buttons

These symbols are not always displayed, but appear subject to the system version and the operating condition.

Symbols:
- Frost protection enabled
- Central heating with standard room temperature
- Central heating with reduced room temperature
- In conjunction with a solar thermal system: Solar circuit pump is running
- Burner in operation

Buttons in the header:
"Menu" Calls up the main menu.
1, 2, 3 Selects the heating circuit.

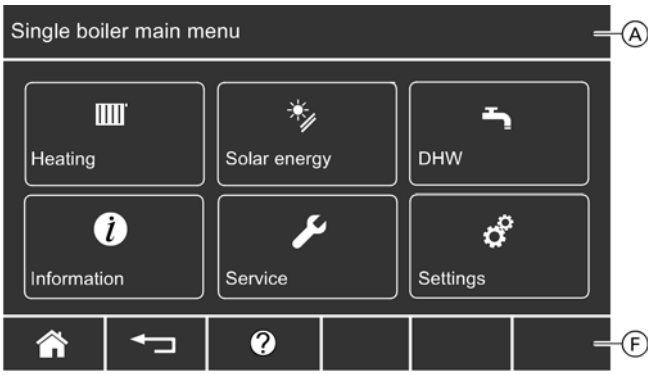
Note: This selection is only available if at least 2 heating circuits can be operated.

\+ Increases the value for standard room temperature.
– Reduces the value for standard room temperature.
You set the operating program (for operating programs, see page 16).
Enables/disables comfort mode.
Enables/disables economy mode.

Footer buttons:
Returns you to the home screen.
Takes you to the previous step in the menu or cancels a setting that has been started.
Calls up the help text.
Calls up fault or service messages.

Main menu
In the main menu, you can make all settings for the functions available in the control unit and carry out scans. You can find the menu overview on page 45.

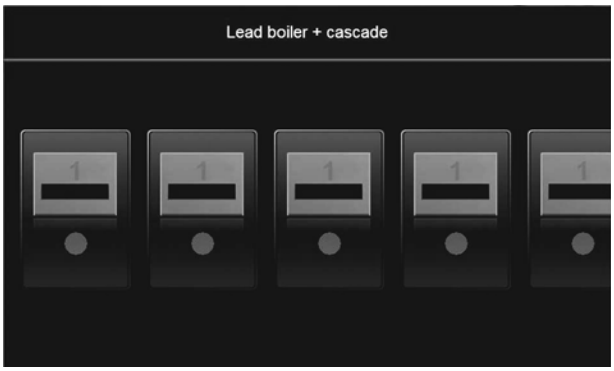
Call up the main menu as follows:
- Screensaver is active (see page 10): Tap the display anywhere and then tap "Menu".
- From anywhere in the menu: Tap and then tap "Menu".



Legend
Ⓐ Header
Ⓕ Footer

Footer buttons:
Returns you to the home screen.
Takes you back one menu level or cancels a setting that has been started.
Calls up the help text.
Calls up fault or service messages.
Scrolls through the menu.

Cascade Control Programming Unit



Legend
Ⓐ Header
Ⓑ Common actual supply temperature
Ⓒ Common set supply temperature
Ⓓ Boiler number
Ⓔ Details on the boiler operating mode (see the following chapter)
Ⓕ Footer

You can change any settings on your heating system centrally at the programming unit of the cascade control unit. If remote control units are installed in your rooms, you can also adjust the settings at the remote control units.

See the Remote Control Operating Instructions.

A screensaver appears after opening the control unit, or if there has not been any operation for some time: Each programming unit is equipped with a touchscreen. To make adjustments and scan information, tap the on-screen buttons.

Home screen

In the home screen, the number of boilers installed in the heating system is shown in a specific order (this is referred to as the boiler sequence). You can change the boiler sequence (see page 33).

Call up the home screen as follows:

- Screensaver is active:
  Tap the display anywhere.
- From anywhere in the menu tap ⌂.

Boiler operating mode

The flame symbol indicates the current boiler heating output:

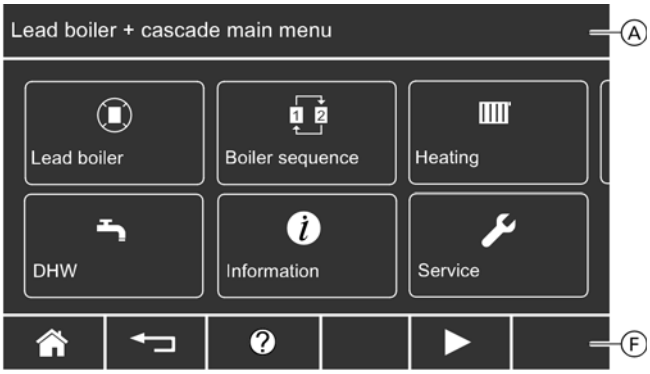
- Flame with ⅓ length ≙ 1 to 33%
- Flame with ⅔ length ≙ 34 to 66%
- Flame with full length ≙ 66 to 100%

Circle symbol:

- Solid white:
  The boiler has been enabled by the cascade control unit and is operating (boiler 1 and 2 in this example).
- Solid grey:
  The boiler is available for generating heat but has not been called for by the cascade control unit (boiler 3 in this example).
- Criss-crossed:
  The boiler has been disabled for heat generation (boiler 4 and 5 in this example).

The value below the circle indicates the current output (in MBH or kW based on the measurement units selected).

Cascade Control Programming Unit *(continued)*



Legend
Ⓐ Header
Ⓕ Footer

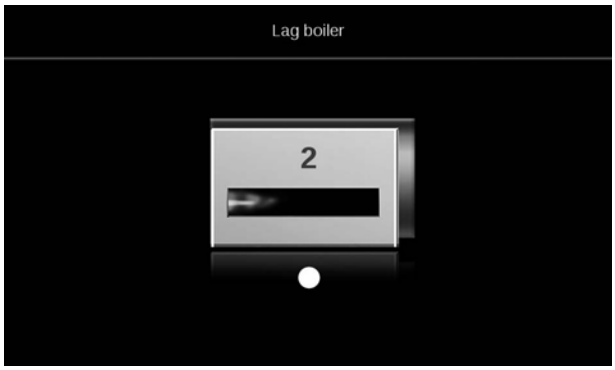
Footer buttons:
Returns you to the home screen.
Takes you back one menu level or cancels a setting that has been started.
Calls up the help text.
Calls up fault or service messages.
Scrolls through the menu.

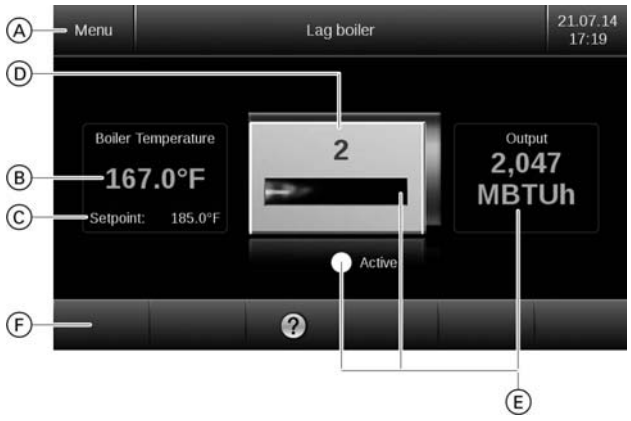
Main menu
In the main menu, you can change the boiler sequence and scan and change all settings for functions made available by the cascade control unit, such as heating defaults and time programs.
You can find the menu overview on page 46.

Call up the main menu as follows:

- Screensaver is active (see page 12):
  Tap the display anywhere and then tap“Menu”.
- From anywhere in the menu:
  Tap and then tap “Menu”.

Programming Unit of the Lag Boiler





Legend
Ⓐ Header
Ⓑ Actual boiler water temperature
Ⓒ Set boiler water temperature
Ⓓ Number of boilers in the boiler sequence
Ⓔ Details on the boiler operating mode (see the following chapter)
Ⓕ Footer

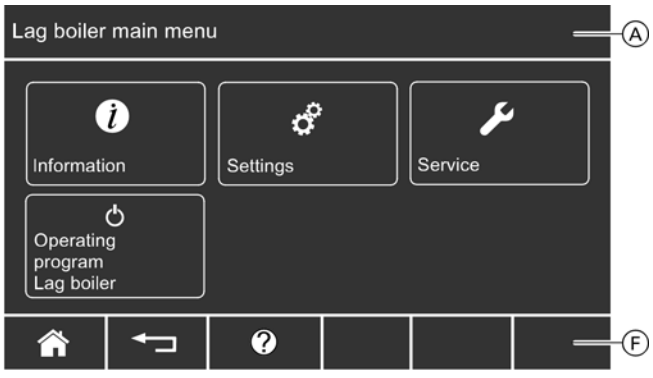
A screensaver appears after opening the control unit, or if there has not been any operation for some time:

Each programming unit is equipped with a touchscreen. To make adjustments and scan information, tap the on-screen buttons.

Home screen
Call up the home screen as follows:
- Screensaver is active:
  Tap the display anywhere.
- From anywhere in the menu tap ⌂.

Boiler operating mode
The flame symbol indicates the current boiler heating output:
- Flame with ⅓ length ≙ 1 to 33%
- Flame with ⅔ length ≙ 34 to 66%
- Flame with full length ≙ 66 to 100%

Circle symbol:
- Solid white:
  The boiler has been enabled by the cascade control unit and is operating.
- Solid grey:
  The boiler is available for generating heat but has not been called for by the cascade control unit.
- Criss-crossed:
  The boiler is not available for generating heat.



Legend
Ⓐ Header
Ⓕ Footer

Main menu
You can make scans and settings in the main menu. You can find the menu overview on page 47.

Call up the main menu as follows:
- Screensaver is active:
  Tap the display anywhere and then tap“Menu”.
- From anywhere in the menu:
  Tap ⌂ and then tap “Menu”.

Footer buttons:
⌂ Returns you to the home screen.
⮌ Takes you back one menu level or cancels a setting that has been started.
? Calls up the help text.
⚠ Calls up fault or service messages.
▶/◀ Scrolls through the menu.

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Starting the Heating System

Legend

Ⓐ ON/OFF switch
Ⓑ Fuses
Ⓒ ON indicator (green)
Ⓓ Fault indicator (red)
Ⓔ Emissions test switch (only for service purposes)

Ask your heating contractor about the following:

- Boiler and relevant control unit type
- Level of the required system pressure
- Position of the following components:
  - Pressure gauge
  - Gas shut-off valve
  - Vents

1. Check the heating system pressure at the pressure gauge. If the pressure of the heating system is too low, top up the water or notify your heating contractor.
2. Open the gas shut-off valve on every boiler.
3. Switch ON the power supply, e.g. at a separate MCB/ fuse or a mains isolator.
4. Switch ON the ON/OFF switch on every control unit. After a short time, the home screen (see page 10) or the default display (see page 12 and 14) appears. The green ON indicator illuminates. Your heating system and, if installed, your remote controls are now ready for use.

Shutting Down the Heating System

Operating programs for central heating, DHW, frost protection

Symbol	Operating program	Function
	"Heating and DHW"	■ The rooms of the selected heating circuit are heated in accordance with the room temperature and time program specified (see chapter "Central heating"). ■ DHW is heated in accordance with the DHW temperature and time program specified (see chapter "DHW heating").
	"DHW only"	■ DHW is heated in accordance with the DHW temperature and time program specified (see chapter "DHW heating"). ■ No central heating ■ Frost protection for the boiler and the DHW tank is active.
	"Standby mode"	■ No central heating ■ No DHW heating ■ Frost protection for the boiler and the DHW tank is active.

With frost protection monitoring

For every heating circuit select the "Standby mode" operating program

- No central heating
- No DHW heating
- Frost protection for the boiler and the DHW tank is active.

Single boiler system control: See page 21
Multi boiler system control: See page 26

Pump exercise function

Circulation pumps are started for 10 sec. once every 24 hours to prevent the pumps from seizing up. This function is active during all operating programs and during warm weather shutdown.

Without frost protection monitoring (shutdown)

1. Switch OFF the ON/OFF switch on every control unit (see page 15).
2. Close the gas shut-off valves.
3. Isolate the heating system from its main power supply, e.g. at the separate MCB/fuse or at a mains isolator.

IMPORTANT

If outdoor temperatures of below 37°F (3°C) are expected, take appropriate measures to protect the heating system from frost.
If necessary, contact your heating contractor.

Information on a prolonged shutdown

- Circulation pumps may seize up as they are not being supplied with power.
- It may be necessary to reset the date and time (see page 34).

Operating Program

Example of a display in the standard menu

Special operating programs

- "External hook-up"
  The operating program set at the control unit was changed by an external device, e.g. EA1 extension.
- "External program"
  The operating program set at the control unit was changed over by the Vitocom communication interface.
- "Holiday program"
  See page 23 for single boiler system.
  See page 29 for multi boiler system.

Note: In the main menu, you can scan the set operating program under "Information".

Single boiler system control only

Note: Special operating programs are displayed alternately with the boiler water temperature.

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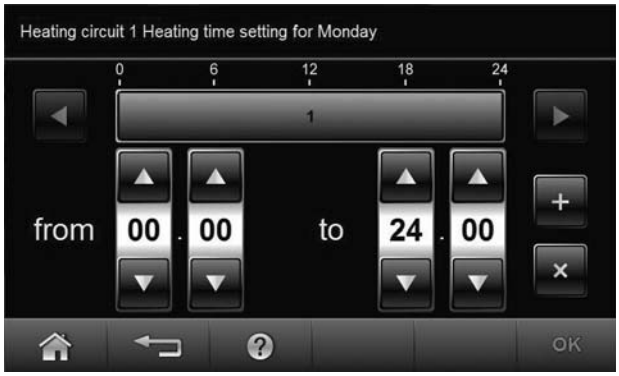
Time Program

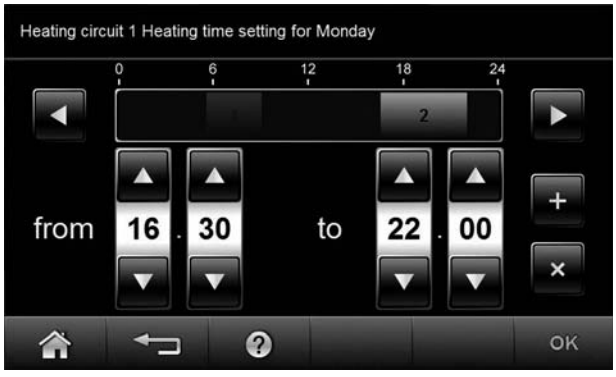
The following explains how to input the settings for a time program. The special features of individual time programs are allotted to the relevant chapters.
You can set up a time program for the following functions:

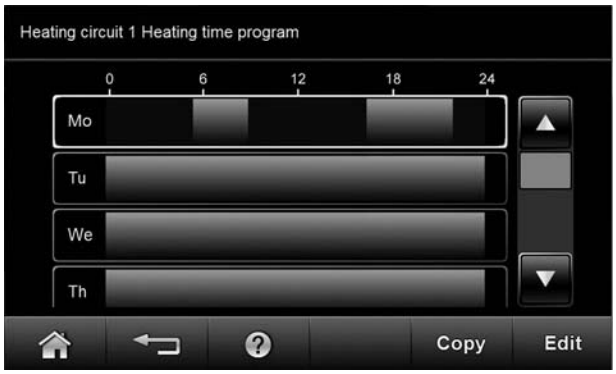
- Central heating
- DHW heating
- DHW recirculation pump

The time program allows you to divide the day into sections. These are called time phases. It is for you to decide what happens in these time phases, e.g. whether your rooms should be heated to the standard room temperature.

- You can set the time program individually, to be the same, or different, for every day of the week.
- You can select up to 4 time phases per day.
- For each time phase you select the start and end points.
- In the main menu, you can scan the time programs under “Information” (see from page 48).







Setting a time program using central heating “Heating circuit 1” as an example

The settings described in the following apply equally for DHW heating and the DHW recirculation pump.

Setting time phases

Example

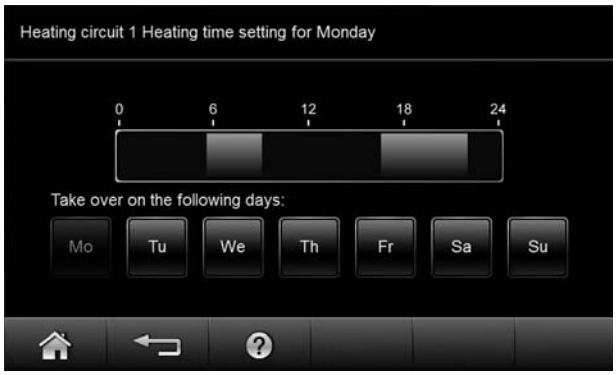
- Time program for “Monday”
- Time phase 1: 05:30 to 09:00 h
- Time phase 2: 16:30 to 22:00 h

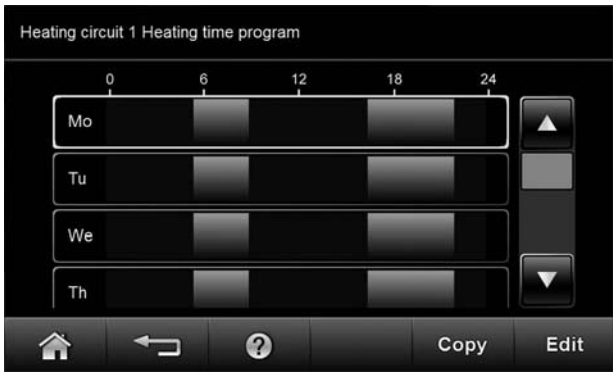
In between these time phases the system heats to a reduced temperature.

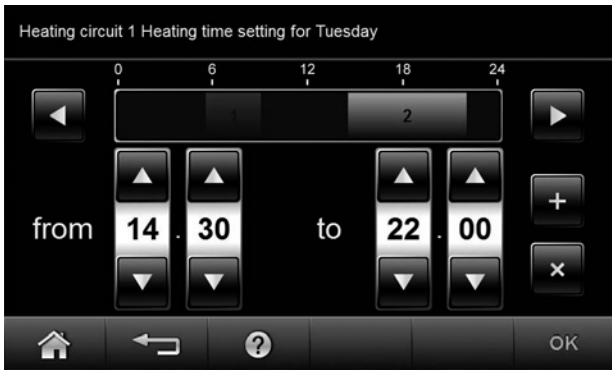
From the home screen tap the following buttons:

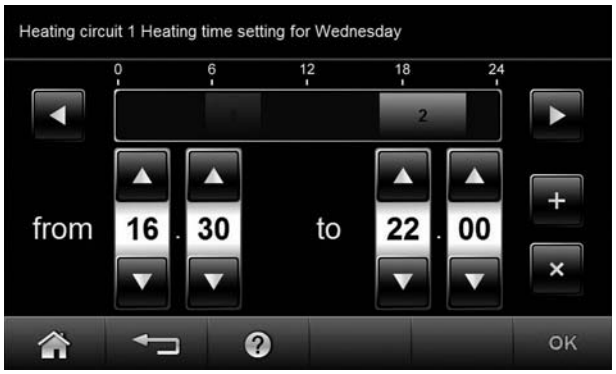
1. “Menu”
2. “Heating”
3. “Heating circuit 1”
4. “Time program heating”
5. “Mo”
6. “Edit
7. ▲/▼ for the start and end point of time phase 1.
   The bar in the time diagram is adjusted.
   Cancelling the setting of a time phase early Tap ⮌.
8. ⊞ for time phase 2
9. ▲/▼ for the start and end point of time phase 2.
   The bar in the time diagram is adjusted.
10. Tap OK to confirm
11. ⌂

Time Program *(continued)*









Setting the time program efficiently

You can copy this time program for every other day of the week. You want to copy this time program for Monday to Tuesday to Friday.

From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1"
4. "Time program heating"
5. "Mo"
6. "Copy"
7. "Tu" , "We", "Th", "Fr"
8. Tap OK to confirm
9. 🏠

Changing time phases

For Tuesday you want to change the start point of time phase 2 to 14:30 h.

From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1"
4. "Time program heating"
5. "Tu"
6. "Edit"
7. ▶ for time phase 2
8. ▲/▼ for the start point of time phase 2.
   The bar in the time diagram is adjusted.
9. Tap OK to confirm
10. 🏠

Deleting time phases

For Wednesday you want to delete time phase 2.

From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1"
4. "Time program heating"
5. "We"
6. "Edit"
7. Select time phase 2
8. "x"
9. Tap OK to confirm
10. 🏠

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Select Heating Circuit

Heating can, if necessary, be split over several heating circuits. From the factory, heating circuits are designated 1, 2, 3 in the header.

- If you are controlling several heating circuits, for all central heating settings, first select the heating circuit to which the change should apply.
- If you are only controlling one heating circuit, this option is not available.

Tap 1, 2 or 3.

Room Temperature

Note: Further information can be found in chapter "Terminology" in this manual.

Setting the standard room temperature for the selected heating circuit

Factory setting: 68°F (20°C)
Setting range: 37 to 99°F (3 to 37°C)

From the home screen tap the following buttons:

1. 1, 2 or 3 in the header for the required heating circuit
2. ⊞/⊟ for the required value
3. Tap OK to confirm

Setting reduced room temperature

Factory setting: 64°F (18°C)
Setting range: 37 to 99°F (3 to 37°C)

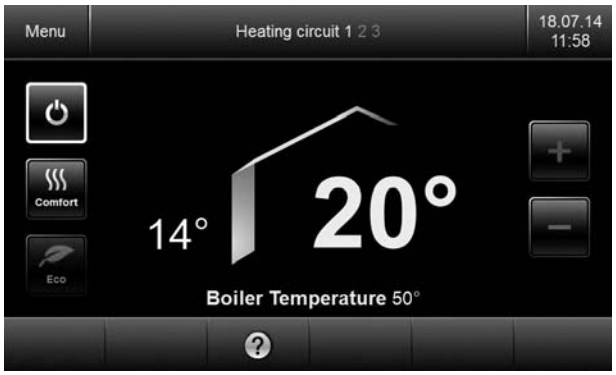
From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Reduced room temp target"
5. ⊞/⊟ for the required value
6. Tap OK to confirm

Central heating with this temperature:

- Between the time phases for central heating with standard temperature
- In the holiday program

Operating Program



Note: Further information can be found in chapter "Terminology" in this manual.

Setting the operating program

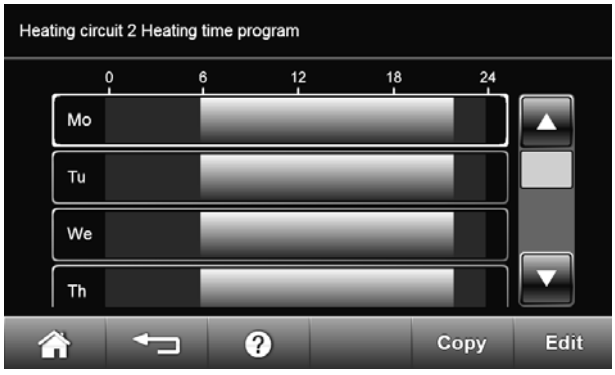
Only required if one of the operating programs ⮌ or ⏻ is set.

From the home screen tap the following buttons:

1. 1, 2 or 3 in the header to select the required heating circuit
2. ⮌ or ⏻
   The frame around the set operating program is highlighted in white.
3. "Heating and DHW"
4. Tap OK to confirm

For information on the operating programs, see page 16.

Time Program



Note: Further information can be found in chapter "Terminology" in this manual.

Setting a time program

Factory setting: One time phase from 00:00 to 24:00 h for every day of the week

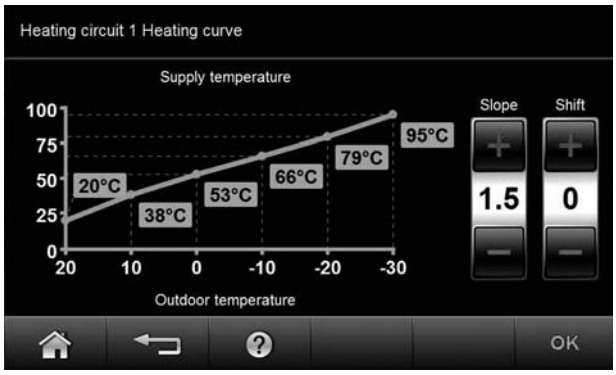
From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Time program heating"

Procedure for setting a time program, see page 17

Note: When adjusting the setting, bear in mind that your heating system requires some time to heat the rooms to the required temperature.

Heating Curve



Note: Further information can be found in chapter "Terminology" in this manual.

Setting the heating curve

Factory setting:

- "Slope": 1.4
- "Shift" of the heating curve: 0

From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Heating curve"
5. +/– for the required value for "Slope" or "Shift"
6. Tap OK to confirm

Example: Changing the heating curve slope to 1.5

A graph clearly shows the change in the heating curve as soon as you alter the value for the slope or shift.

Depending on various outdoor temperatures (shown on the horizontal axis), the assigned set supply temperatures for the heating circuit are highlighted white.

Stopping Central Heating

Only required if the operating program is set.

From the home screen tap the following buttons:

1. 1, 2 or 3 in the header for the required heating circuit
2.
3. - "DHW only" (no central heating)
   or
   - "Standby mode" (frost protection for the boiler and the DHW tank is active)
4. Tap OK to confirm

Comfort Function

Setting "Comfort mode"

From the home screen tap the following buttons:

1. 1, 2 or 3 in the header to select the required heating circuit
2.
3. for the required set room temperature in comfort mode
4. Tap OK to confirm. The frame around symbol is highlighted in white.

- The rooms are heated to the required temperature.
- Provided your heating contractor has not altered the settings, DHW is heated to the selected set temperature first, before central heating begins.
- The DHW circulation pump is switched on (if installed).

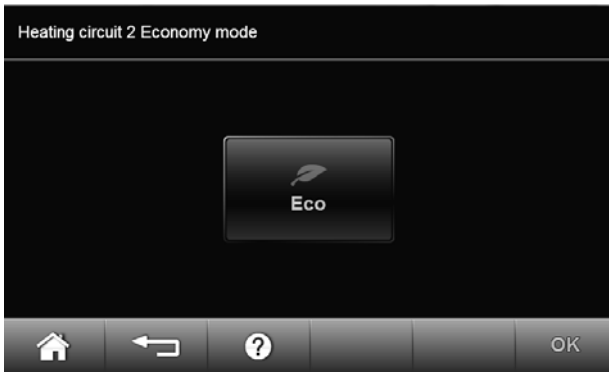
Note: The standard set room temperature continues to be shown in the standard menu.

Ending "Comfort mode"

- Again tap .
  or
- Automatically when the system switches to standard heating mode in accordance with the time program
  or
- Automatically after 8 hours

Note: If you want to make changes to this, contact your local heating contractor.

Energy Saving Function "Economy Mode"



Setting "Economy mode"

From the home screen tap the following buttons:

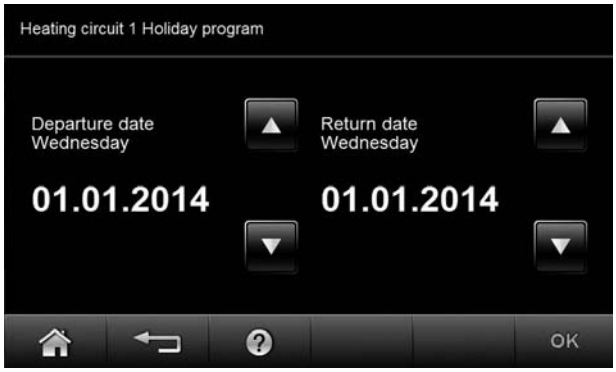
1. 1, 2 or 3 in the header for the required heating circuit
2.
3. Tap OK to confirm. The frame around symbol is highlighted in white.

Note: You can only enable this energy saving function in standard heating mode.

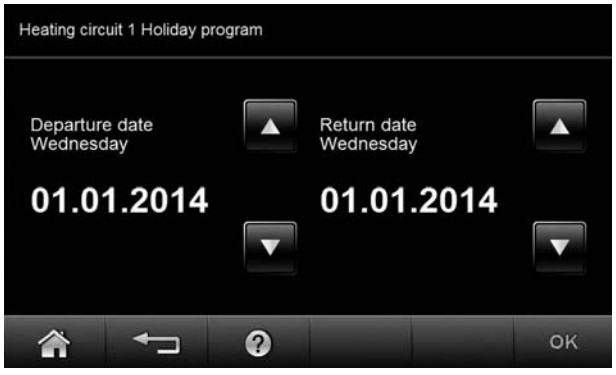
Ending "Economy mode"

- Again tap .
  or
- Automatically when the system switches to reduced heating mode in accordance with the time program

Energy Saving Function “Holiday Program”



Display in the standard menu



Setting “Holiday program”

Note: The holiday program affects all heating circuits. If you want to make changes to this, contact your local heating contractor.

The holiday program starts at 00:00 h the day after the departure date. The holiday program ends at 00:00 h on the return date. This means that the set time program is active on the days of departure and return.

From the home screen tap the following buttons:

1. “Menu”
2. “Heating”
3. “Heating circuit 1”, “Heating circuit 2” or “Heating circuit 3” as the required heating circuit
4. “Holiday program”
5. ▲/▼ for “Departure date” and “Return date”
6. Tap OK to confirm

The holiday program has the following effect:

- Central heating:
  - For heating circuits in the operating program “Heating and DHW”:
    The rooms are heated to the set reduced room temperature (see page 19).
  - For heating circuits in the operating program “DHW only”:

No central heating with frost protection for the boiler and the DHW tank is active.

- DHW heating:
  No DHW heating. Frost protection for the DHW tank is active.

Cancelling or deleting the “Holiday program”

From the home screen tap the following buttons:

1. “Menu”
2. “Heating”
3. “Heating circuit 1”, “Heating circuit 2” or “Heating circuit 3” as the required heating circuit
4. “Holiday program”
5. ▼ for “Return date” the same date as for the “Departure date”
6. Tap OK to confirm

Room Temperature

Note: Further information can be found in chapter "Terminology" in this manual.

You can make the following settings only on the cascade control unit.

Setting the standard room temperature for the selected heating circuit

Factory setting: 68°F (20°C)
Setting range: 37 to 99°F (3 to 37°C)

From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. " Room temp set point"
5. ⊞/⊟ for the required value
6. Tap OK to confirm

Setting reduced room temperature

Factory setting: 64°F (18°C)
Setting range: 37 to 99°F (3 to 37°C)

From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Red room temp set point"
5. ⊞/⊟ for the required value
6. Tap OK to confirm

Central heating with this temperature:

- Between the time phases for central heating with standard temperature
- In the holiday program

Operating Program

Note: Further information can be found in chapter "Terminology" in this manual.

Setting the operating program

Cascade control unit

From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Operating program"
5. "Heating and DHW"
6. Tap OK to confirm

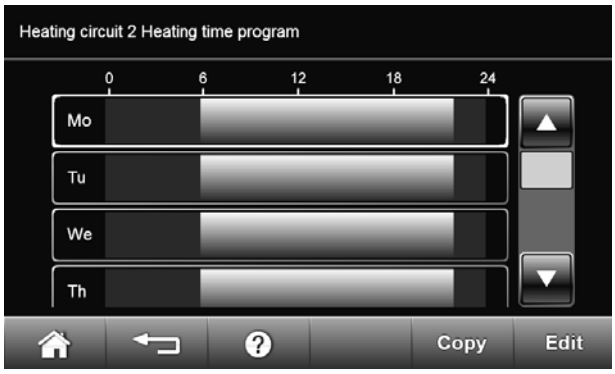
Lag boiler control unit

From the home screen tap the following buttons:

1. "Menu"
2. "Operating program lag boiler"
3. "Heating"
4. Tap OK to confirm

For information on the operating programs, see page 16.

Time Program



Note: Further information can be found in chapter "Terminology" in this manual.

You can make the following settings only on the cascade control unit.

Setting a time program

Factory setting: One time phase from 00:00 to 24:00 h for every day of the week

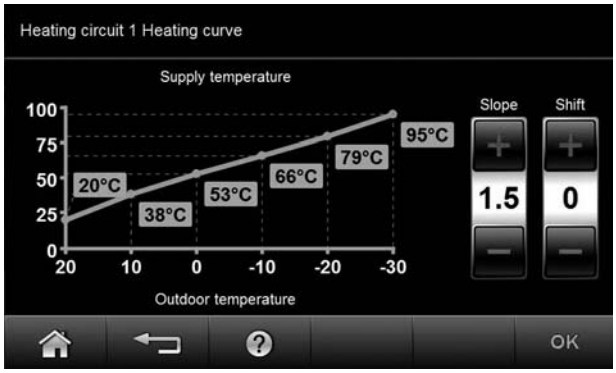
From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Time program heating"
5. Tap OK to confirm

Procedure for setting a time program, see page 17

Note: When adjusting the setting, bear in mind that your heating system requires some time to heat the rooms to the required temperature.

Heating Curve



Note: Further information can be found in chapter "Terminology" in this manual.

You can make the following settings only on the cascade control unit.

Setting the heating curve

Factory setting:

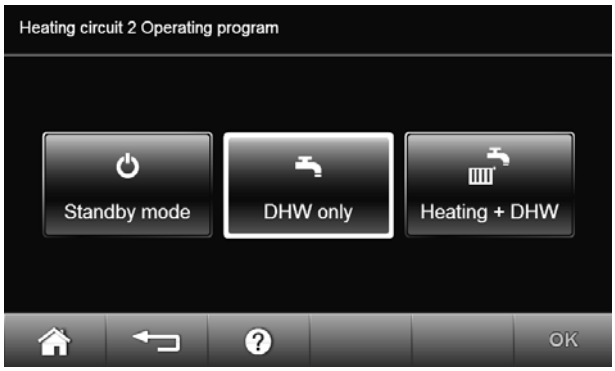
- "Slope": 1.4
- "Shift" of the heating curve: 0

From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Heating curve"
5. +/– for the required value for "Slope" or "Shift"
6. Tap OK to confirm

Example: Changing the heating curve slope to 1.5
A graph clearly shows the change in the heating curve as soon as you alter the value for the slope or shift.
Depending on various outdoor temperatures (shown on the horizontal axis), the assigned set supply temperatures for the heating circuit are highlighted white.

Stopping Central Heating



From the home screen tap the following buttons:

You can make the following settings only on the cascade control unit.

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Operating program"
5. "DHW only" (no central heating)
   or
   "Standby mode" (frost protection for the boiler and the DHW tank is active)
6. Tap OK to confirm

Comfort Function

Setting "Comfort mode"

You can make the following settings only on the cascade control unit.

From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Comfort mode"
5. "Comfort"
6. Tap OK to confirm
7. ⊞/⊟ for the required set room temperature in comfort mode
8. Tap OK to confirm

- The rooms are heated to the required temperature. Provided your heating contractor has not altered the settings, DHW is heated to the selected set temperature first, before central heating begins.
- The DHW circulation pump is switched on (if installed).

Ending "Comfort mode"

From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Comfort mode"
5. "Comfort" The white frame is reset.
6. Tap OK to confirm
   or

- Automatically when the system switches to standard heating mode in accordance with the time program
  or
- Automatically after 8 hours

Note: If you want to make changes to this, contact your local heating contractor.

Energy Saving Function "Economy mode"

Setting "Economy mode"

You can make the following settings only on the cascade control unit.

From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Economy mode"
5. "Eco"
6. Tap OK to confirm

Note: You can only enable this energy saving function in standard heating mode.

Ending "Economy mode"

From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Economy mode"
5. "Eco" The white frame is reset.
6. Tap OK to confirm
   or
   Automatically when the system switches to reduced heating mode in accordance with the time program

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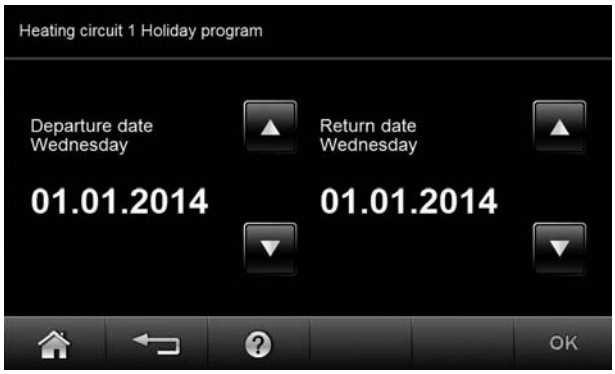
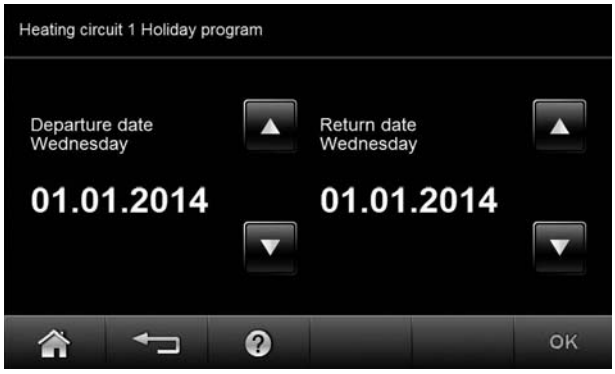
Energy Saving Function “Holiday program”





Setting “Holiday program”

Note: The holiday program affects all heating circuits. If you want to make changes to this, contact your local heating contractor.

You can make the following settings only on the cascade control unit.

The holiday program starts at 00:00 h the day after the departure date. The holiday program ends at 00:00 h on the return date. This means that the set time program is active on the days of departure and return.

From the home screen tap the following buttons:

1. “Menu”
2. “Heating”
3. “Heating circuit 1”, “Heating circuit 2” or “Heating circuit 3” as the required heating circuit
4. “Holiday program”
5. ▲/▼ for “Departure date” and “Return date”
6. Tap OK to confirm

The holiday program has the following effect:

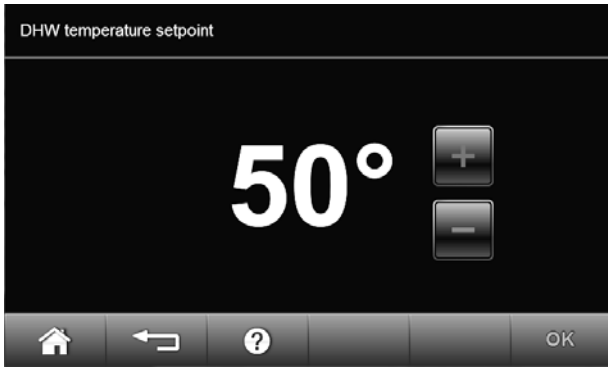
- Central heating:
  - For heating circuits in the operating program “Heating and DHW”: The rooms are heated to the set reduced room temperature (see page 24).
  - For heating circuits in the operating program “DHW only”: No central heating. Frost protection for the boiler and the DHW tank is active.
- DHW heating:
  No DHW heating. Frost protection for the DHW tank is active.

Cancelling or deleting the “Holiday program”

From the home screen tap the following buttons:

1. “Menu”
2. “Heating”
3. “Heating circuit 1”, “Heating circuit 2” or “Heating circuit 3” as the required heating circuit
4. “Holiday program”
5. ▼ for “Return date” the same date as for the “Departure date”
6. Tap OK to confirm

DHW Temperature



Factory setting: 122°F (50°C)
Setting range: 50 to 140°F (10 to 60°C)

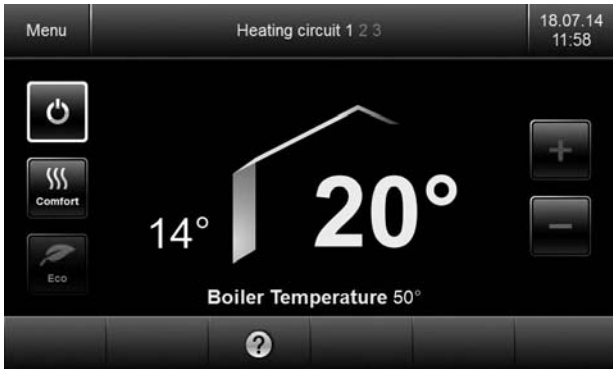
If you want to make changes to this, contact your local heating contractor.

From the home screen tap the following buttons:

1. "Menu"
2. "DHW"
3. "DHW temperature"
4. ⊞/⊟ for the required value
5. Tap OK to confirm

Note: This setting cannot be adjusted from any lag boiler.

Operating Program



Note: Further information can be found in chapter "Terminology" in this manual.

Setting the operating program
Single boiler system control

From the home screen tap the following buttons:

1. 1, 2 or 3 in the header to select the required heating circuit
2. ⏻
3. "DHW only" (no central heating)
   or
   "Heating and DHW"
4. Tap OK to confirm

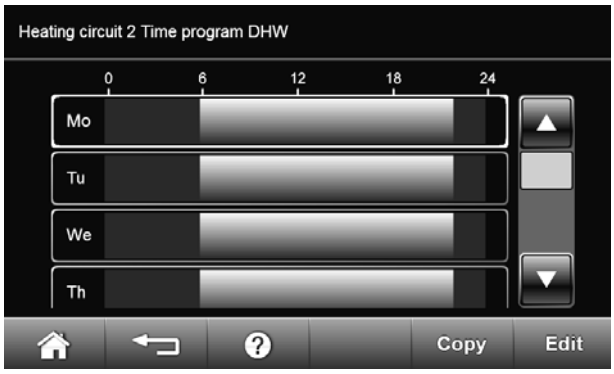
For information on the operating programs, see page 16

Cascade control unit

From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Operating program"
5. "DHW only" or "Heating and DHW"
6. Tap OK to confirm

Time Program



Note: Further information can be found in chapter "Terminology" in this manual.

Setting the time program

Factory setting: "Automatic"
During operation with standard room temperature, DHW in the DHW tank is heated to the set DHW temperature (see page 50).
The time phase for DHW heating automatically starts half an hour earlier than the time phase for central heating with standard room temperature. DHW heating may start, for example, at 05:30 h if the start time for central heating is 06:00 h. This means hot water is already available when your system starts operating with standard room temperature.
You can change this time program individually in accordance with your requirements.

From the home screen tap the following buttons:

1. "Menu"
2. "DHW"
3. "Time program DHW"
4. "Individual"
5. Tap OK to confirm

For how to set a time program, see page 17.

Note: - The DHW is not heated between the time phases. Frost protection for the DHW tank is active.
- When setting time programs, bear in mind that your heating system requires some time to heat the DHW tank to the required temperature
- Any started water heating process continues until the set DHW temperature is reached, even if the stop time has been reached.

DHW 4th phase heating (auxillary function)

This function can be used to heat the water in the DHW tank to a higher set DHW temperature. Your heating contractor can enable this function by specifying a second set DHW temperature.
Set time phase 4 for this. During this time, DHW will be heated to the second set DHW temperature value.

Note: A start and stop time must be set for the 2nd and 3rd time phase.

Note: This setting cannot be adjusted from any lag boiler.

Time Program *(continued)*

DHW heating once, outside the time program

Note: The operating program “Heating and DHW” or “DHW only” must be set for at least one system heating circuit. Enable “Comfort mode” (see page 37 or 45) and immediately disable it again. This prevents unintentional central heating with standard room temperature.

Setting the time program for the DHW recirculation pump

Factory setting: “Automatic”
The DHW recirculation pump operates in parallel to the DHW heating time program. You can change this time program individually in accordance with your requirements.

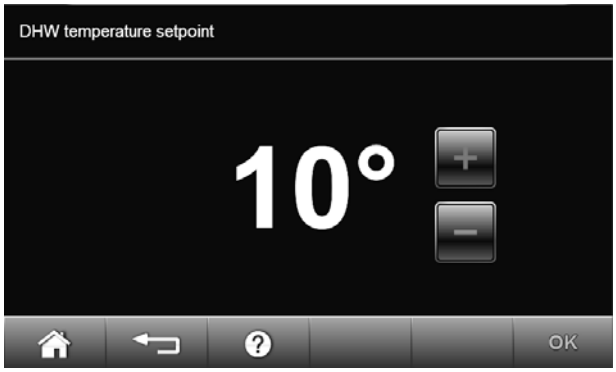
From the home screen tap the following buttons:

1. “Menu”
2. “DHW”
3. “DHW recirculation time program”
4. “Individual”
5. Tap OK to confirm

For how to set a time program, see page 17.

Note: The DHW recirculation pump remains off between the time phases.

Stopping DHW Heating



From the home screen tap the following buttons:

1. “Menu”
2. “DHW”
3. “DHW temperature”
4. ⊟ for 50°F (10°C)
5. Tap OK to confirm

Note: Not adjustable from a lag boiler.

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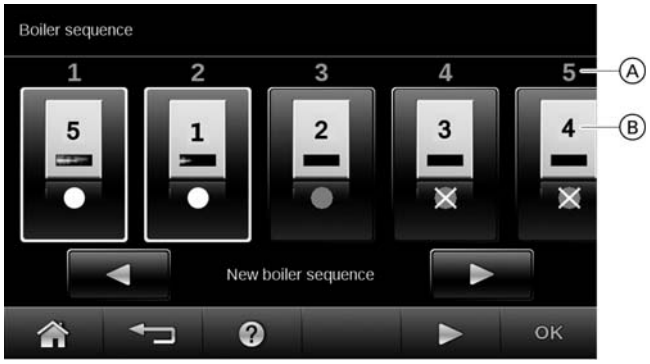
Setting the Boiler Sequence



Only for cascade control unit. Subject to the coding set and internal control calculations, the control unit offers various boiler sequences. This ensures that the boilers are equally loaded.

From the home screen tap the following buttons:

1. "Menu"
2. "Boiler sequence"
3. ◀/▶ for "New boiler sequence"

Note: Boiler label 'lead' or 'lag' (as displayed on the home screen) does not change based on the current boiler sequence. This label has been set through initial configuration of the boiler.

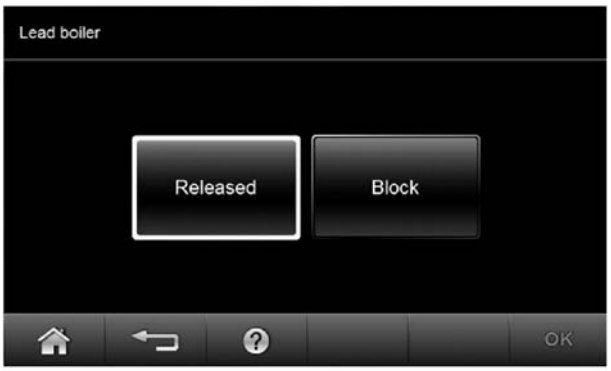
Legend

Ⓐ Sequence in which the boilers are started
Ⓑ Number permanently assigned to the boiler

The diagram shows the following boiler sequence:

1. Boiler 5 (labelled 'lag' on the home screen)
2. Boiler 1 (labelled 'lead' on the home screen)
3. Boiler 2 (labelled 'lag' on the home screen)
4. Boiler 3 (labelled 'lag' on the home screen)
5. Boiler 4 (labelled 'lag' on the home screen)

Enabling and Disabling Lead Boiler with Cascade Control Unit

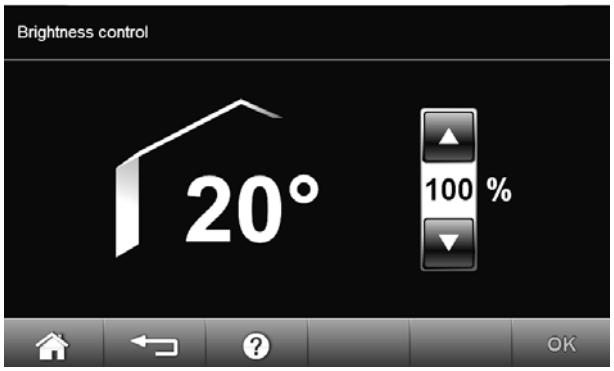


You can enable this function if the boiler is to be taken out of use temporarily, e.g. for maintenance work.

From the home screen tap the following buttons:

1. "Menu"
2. "Lead boiler"
3. "Block" or "Release"
4. Tap OK to confirm

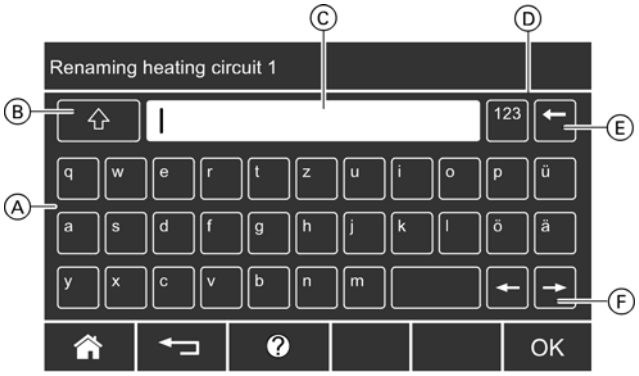
Setting the Display Backlighting



From the home screen tap the following buttons:

1. "Menu"
2. "Settings"
3. "Screen"
4. "Brightness standby" or "Brightness control"
5. ▲/▼ for the required value
6. Tap OK to confirm

Naming Heating Circuits



Ⓐ Keyboard
Ⓑ Changeover between upper and lower case letters
Ⓒ Text box (limited to 32 characters)
Ⓓ Changeover to the number keypad
Ⓔ Deleting individual symbols
Ⓕ Scrolling forwards and backwards in the text box

You can name all heating circuits individually.

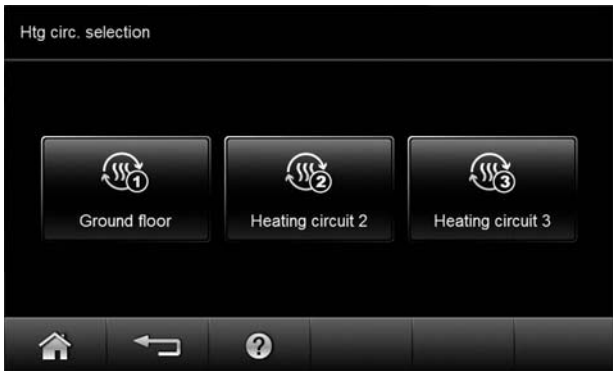
Information on single boiler system control
The abbreviations 1, 2, 3 in the standard menu are retained (see page 10).

From the home screen tap the following buttons:

1. "Menu"
2. "Settings"
3. "Name for heating circuit"
4. Select "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" and enter the required name, such as "Ground floor".
5. Tap OK to confirm

The name assigned for each heating circuit appears in the main menu.

Note: Not adjustable from a lag boiler.



Setting the Time and Date

The time and date are factory-set. If your heating system has been shut down for a prolonged period, you may need to reset the time and date.

From the home screen tap the following buttons:

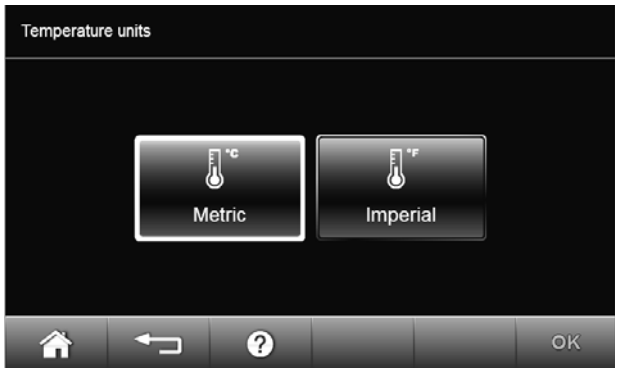
1. "Menu"
2. "Settings"
3. "Date / Time"
4. "Date" or "Time"
5. ▲/▼ for the required value
6. Tap OK to confirm

Language Selection

From the home screen tap the following buttons:

1. “Menu”
2. “Settings”
3. “Language”
4. Required language
5. Tap OK to confirm

Setting the Measuring Units



From the home screen tap the following buttons:

1. “Menu”
2. “Settings”
3. “Measuring units”
4. “Metric” or “Imperial”
5. Tap OK to confirm

Restoring Factory Settings

You can individually restore all modified values for each heating circuit to their factory setting.

Note: If heating circuits have been named (see chapter “Naming heating circuits”) the assigned name is retained.

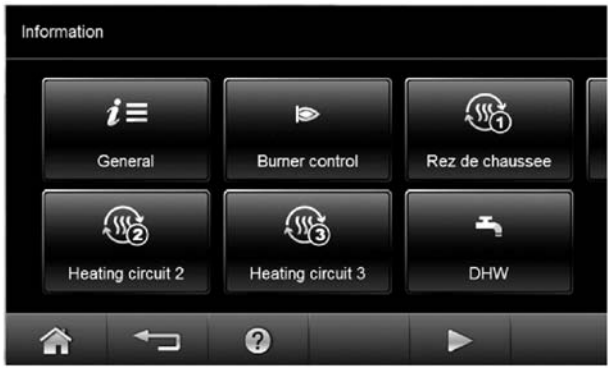
Settings and values that are reset:

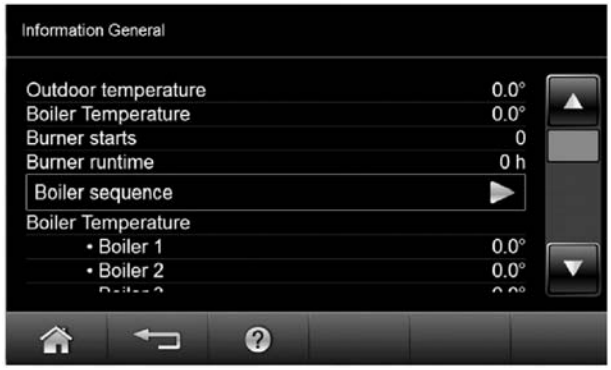
- Set room temperature
- Set reduced room temperature
- Operating program
- Set DHW temperature
- Time program for central heating
- Time program for DHW heating
- Time program for DHW circulation pump
- Heating curve slope and shift
- Comfort and energy saving functions are deleted.

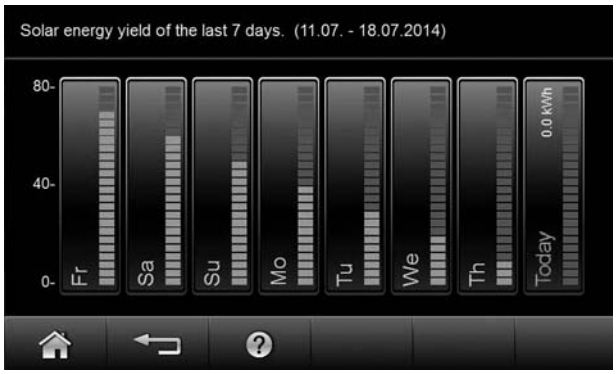
From the home screen tap the following buttons:

1. “Menu”
2. “Settings”
3. “Factory settings”
4. “Heating circuit 1”, “Heating circuit 2” or “Heating circuit 3” as the required heating circuit
5. Tap OK to confirm

Scanning information







Subject to the components connected and the settings made, you can scan current temperatures and operating conditions.
Information in the main menu is split into groups:

- "General"
- "Combustion controller"
- "Heating circuit 1"
- "Heating circuit 2"
- "Heating circuit 3"
- "DHW"
- "Solar energy"
- "Reset data"
- "Service address"

Note: If heating circuits have been named (see chapter "Naming heating circuits") the assigned name is displayed. Detailed options for data scanning on individual groups can be found in chapter "Options for data scanning".

From the home screen tap the following buttons:

1. "Menu"
2. "Information"

Scanning the solar energy yield in conjunction with solar thermal systems

Only in connection with solar control unit, type SM1. There you can scan the solar energy yield in conjunction with a Vitosolic solar control unit.

From the home screen tap the following buttons:

1. "Menu"
2. "Solar energy"

The solar energy yield is shown in diagrammatic form.

If you want to display the value in numerical form, tap the respective day of the week.

Note: For further scanning options, e.g. for the solar circuit pump hours run, see the extended menu under "Information" in the "Solar" group.

Scanning Information *(continued)*

Service address

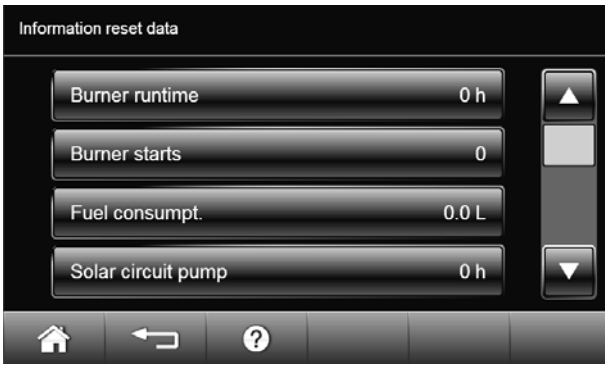
If your heating contractor has entered their details, you can scan these.

From the home screen tap the following buttons:

1. "Menu"
2. "Information"
3. "Service contact details" Each text box is limited to 45 characters.

Note: If there are no details, tap the white field.
The keyboard appears (see page 34).

Resetting Data



You can reset the following data:

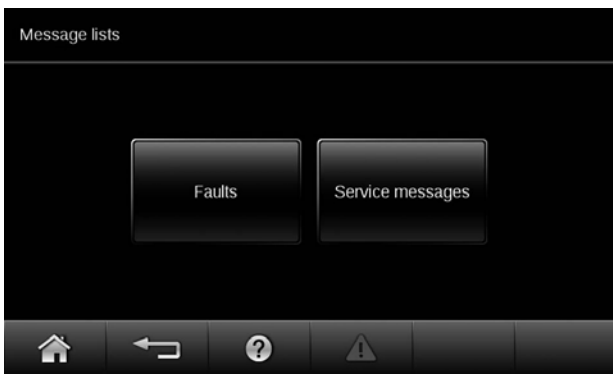
- Burner hours run
- Fuel consumption
- In conjunction with a solar thermal system: Solar energy yield, solar circuit pump hours run and hours run output 22
- All the above data simultaneously

From the home screen tap the following buttons:

1. "Menu"
2. "Information"
3. "Reset data"
4. Select required data point or "All details".
5. Tap OK to confirm

Scanning Service Messages

Your heating contractor can set service intervals (limits) (for burner hours run, for example). A service message is generated when this value is exceeded.
Your display indicates that your heating system is due for a service by showing symbol 🔧 and "Service".



Tap "Confirm".

The footer shows ⚠.

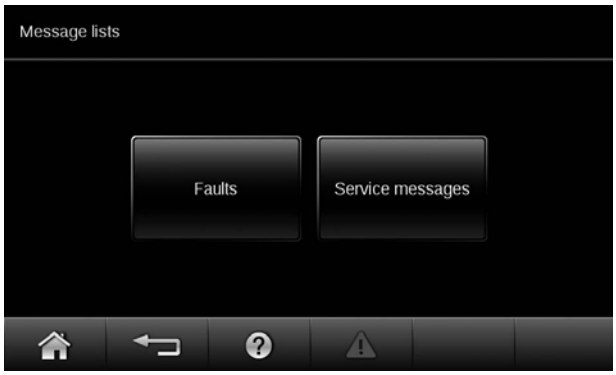
Calling up a service message

1. Tap ⚠ in the footer.
   The service message appears in yellow in a list.
2. Notify your local heating contractor.
   After tapping ⚠ the following will be displayed if your heating system has several fault messages simultaneously:

Tap "Service messages"
The service messages appear in yellow in a list.

Note: If the service cannot be carried out until a later date, the service message will be displayed again the following Monday.

Scanning System Fault Messages



Your display indicates that your heating system has developed faults by showing symbol ⚠ and "Faults". The red fault indicator flashes on the control unit enclosure (see chapter "Starting the heating system").

Tap "Close".
The footer shows ⚠.

Note: - If you have connected signalling equipment to indicate fault messages (e.g. a buzzer), this is deactivated when the fault message is acknowledged.
- If troubleshooting cannot be carried out until a later date, the fault message will be displayed again the following day at 07:00 h. The alarm equipment is switched on again.

Calling up a fault message

1. Tap ⚠ in the footer. The fault message appears in red in a list.
2. Tapping ? calls up information on the heating system characteristics. Tips on measures you can take yourself before notifying your heating contractor are displayed.
3. Make a note of the fault code and the cause for the fault. In this example: f0 "Combustion controller". This enables the heating contractor to be better prepared and may save you unnecessary travelling costs.
4. Notify your local heating contractor.
5. Tap "Acknowledge".

⚠ WARNING

If faults are not rectified, they can have life threatening consequences. Do not acknowledge fault messages several times in quick succession. Notify your heating contractor if a fault recurs. Your heating contractor will be able to analyze the cause and rectify the fault.

After tapping ⚠ the following will be displayed if your heating system has several service messages simultaneously:

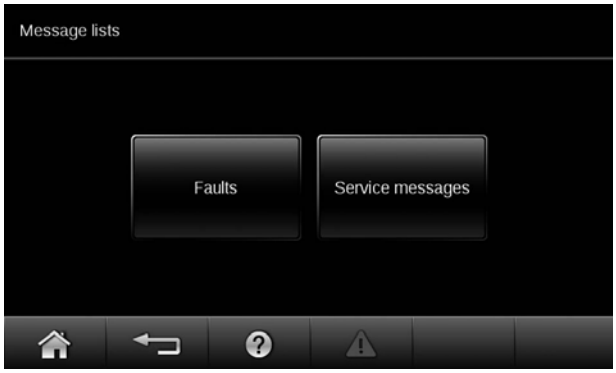
Tap "Faults"
The fault messages appear in red in a list.

Scanning Burner Fault Messages

Your display indicates that your heating system has developed faults by showing symbol ⚠ and “Faults”. The red fault indicator flashes on the control unit enclosure (see chapter “Starting the heating system”).

Tap “Close”.
The footer shows ⚠.

Note: - If you have connected signalling equipment to indicate fault messages (e.g. a buzzer), this is deactivated when the fault message is acknowledged.
- If troubleshooting cannot be carried out until a later date, the fault message will be displayed again the following day at 07:00 h. The alarm equipment is switched on again.



Calling up a fault message

1. Tap ⚠ in the footer. The fault message appears in red in a list.
2. Tapping ? calls up information on the heating system characteristics. Tips on measures you can take yourself before notifying your heating contractor are displayed.
3. Make a note of the fault code and the cause for the fault. In this example: f0 “Combustion controller”. This enables the heating contractor to be better prepared and may save you unnecessary travelling costs.
4. Notify your local heating contractor.
5. Tap “Acknowledge”.

⚠ WARNING

If faults are not rectified, they can have life threatening consequences. Do not acknowledge fault messages several times in quick succession. Notify your heating contractor if a fault recurs. Your heating contractor will be able to analyze the cause and rectify the fault.

After tapping ⚠ the following will be displayed if your heating system has several service messages simultaneously:

Tap “Faults”
The fault messages appear in red in a list.

Emissions Test Mode

Emissions test mode for testing the flue gas with briefly raised boiler water temperature. Emissions test mode should only be activated by your flue gas inspector during the annual inspection.

Set the emissions test switch (see chapter “Starting the heating system”) to position .

The following functions are activated:

- The burner is switched ON.
- The pumps are started.

Note: Emissions test mode in the case of a lag boiler control unit: Only the boiler pump starts.

- The mixing valves remain set to the control function.
- The electronic temperature controller regulates the boiler water temperature.

Ending emissions test mode

1. Set the emissions test switch to position .
   or
   Close the flap.

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Rooms are Too Cold

Cause	Remedy
The heating system is off	■ Switch ON the ON/OFF switch on the control units (see page 24). ■ Switch ON the mains isolator, if installed (outside the boiler room). ■ Set the MCB in the power distribution board (main domestic MCB).
■ Control unit incorrectly adjusted. ■ The remote control (if installed) is set incorrectly. Separate operating instructions	Central heating must be enabled. Check the settings and correct if required: ■ Operating program (see pages 20 or 25) ■ Room temperature (see pages 19 or 24) ■ Time (see page 34) ■ Time program, central heating (see pages 20 or 25) ■ Heating curve (see pages 21 or 26)
Only when operating with DHW heating: The DHW tank is being heated.	Wait until the DHW tank has been heated up. Reduce the DHW draw-off rate or temporarily reduce the standard DHW temperature as required
No fuel.	With oil/LPG: Check the fuel reserves and re-order if required. With natural gas: Open the gas shut-off valve. If necessary, check with your gas supply utility.
“Burner fault” will be displayed.	Follow the display prompts. Reset the burner only once. **⚠ WARNING** **If faults are not rectified, they can have life threatening consequences. Do not acknowledge fault messages several times in quick succession. Notify your heating contractor if a fault recurs. Your heating contractor will be able to analyze the cause and rectify the fault.**
“Fault” is displayed. The red fault indicator flashes on the control unit enclosure.	Check what type of fault it is. Acknowledge the fault (see page 38). Notify your heating contractor if necessary.
The mixing valve motor is faulty.	Adjust the mixing valve manually.

Rooms are Too Hot

Cause	Remedy
■ Control unit incorrectly adjusted. ■ The remote control (if installed) is set incorrectly. Separate operating instructions	Check the settings and correct if required: ■ Operating program (see pages 20 or 25) ■ Room temperature (see pages 19 or 24) ■ Time (see page 34) ■ Room temperature time program (see pages 20 or 25) ■ Heating curve (see pages 21 or 26)
"Fault" is displayed. The red fault indicator flashes on the control unit enclosure.	Check what type of fault it is. Acknowledge the fault (see page 38). Notify your heating contractor if necessary.
The mixing valve motor is faulty.	Adjust the mixing valve manually.
Emissions test switch is set to (see page 40).	Close the flap.

There is No DHW

Cause	Remedy
The heating system is off.	■ Switch ON the ON/OFF switch on the control units (see page 15). ■ Switch ON the mains isolator, if installed (outside the boiler room). ■ Set the MCB in the power distribution board (main domestic MCB).
■ Control unit incorrectly adjusted. ■ The remote control (if installed) is set incorrectly. Separate operating instructions	DHW heating must be enabled. Check the settings and correct if required: ■ Operating program (see page 30) ■ DHW temperature (see page 30) ■ Time program DHW heating (see page 31) ■ Time (see page 34)
No fuel.	With oil/LPG: Check the fuel reserves and re-order if required. With natural gas: Open the gas shut-off valve. If necessary, check with your gas supply utility.
"Fault" is displayed. The red fault indicator flashes on the control unit enclosure.	Check what type of fault it is. Acknowledge the fault (see page 38). Notify your heating contractor if necessary.

The DHW is Too Hot

Cause	Remedy
The control unit is set incorrectly.	Check and correct the DHW temperature, if required (see page 30).
The DHW is being heated by the solar thermal system.	Check the settings at the solar control unit and correct them if required. Separate operating instructions
Emissions test switch is set to . (see page 40)	Close the flap.

“Fault” will be Displayed

Cause	Remedy
Heating system fault.	Proceed as described on page 38.

“Service” will be Displayed

Cause	Remedy
The time for a service, as specified by your heating contractor, has arrived.	Proceed as described on page 37.

Inspection and Maintenance

Cleaning

All equipment can be cleaned with a commercially available domestic cleaning agent (non-scouring).
Clean the surface of the programming unit with the microfibre cloth provided.

Inspection and maintenance

Regular maintenance ensures trouble free, energy efficient, environmentally responsible and safe heating. Your heating system must be serviced by an authorized contractor at least every 2 years. For this, it is best to arrange an inspection and maintenance contract with your local heating contractor.

Appliance

Increased contamination raises the flue gas temperature and thereby increases energy losses. We recommend the appliance is cleaned annually.

DHW tank (if installed)

Maintenance and cleaning should be carried out no later than 2 years after commissioning and as required thereafter.
Only a qualified heating contractor should clean the inside of a DHW tank and the DHW connections.
If any water treatment equipment (e.g. a sluice or injection system) is installed in the cold water supply of the DHW tank, ensure this is refilled in good time.
In this connection, observe the manufacturer's instructions.

In addition for Vitocell 100:
We recommend that the correct function of the sacrificial anode is checked annually by your heating contractor. The function of the sacrificial anode can be checked without interrupting the system operation. The heating contractor will check the earth current with an anode tester.

Safety valve (DHW tank)

The function of the safety valve must be checked every six months by the user or a contractor through venting (see valve manufacturer's instructions). The valve seat may become contaminated.
Water may drip from the safety valve during a heat-up process. The outlet is open to the atmosphere and must not be closed off.

Potable water filter (if installed)

To maintain high hygienic standards, proceed as follows:

- Replace filter element on non-back flushing filters every six months (visual inspection every two months).
- On back flushing filters, back flush every two months.

Damaged cables / lines

If there is damage to the connecting cables or lines of the appliance or externally installed accessories, these must be replaced with special cables or lines.
Only use Viessmann cables / lines as replacement.
For this, notify your qualified contractor.

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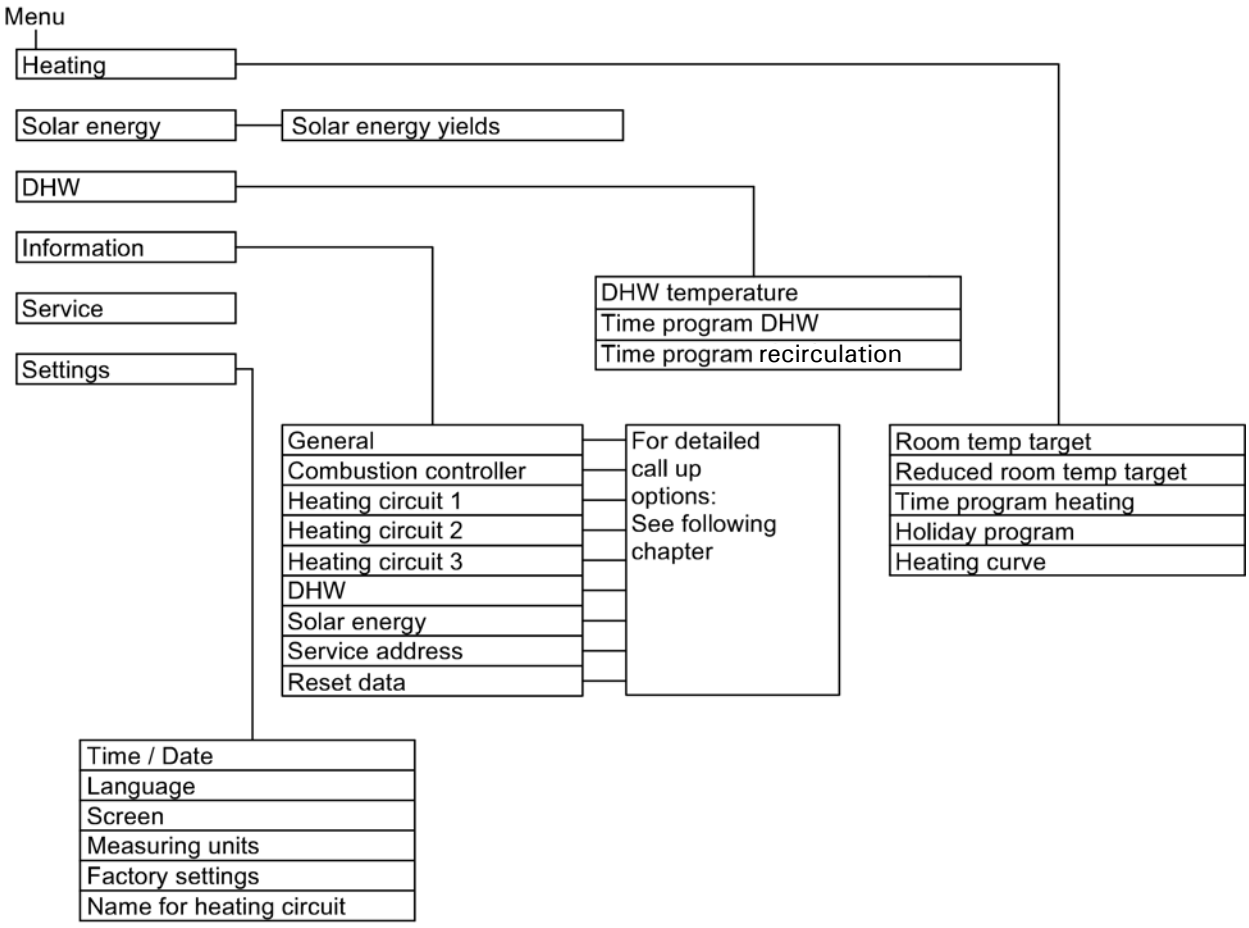
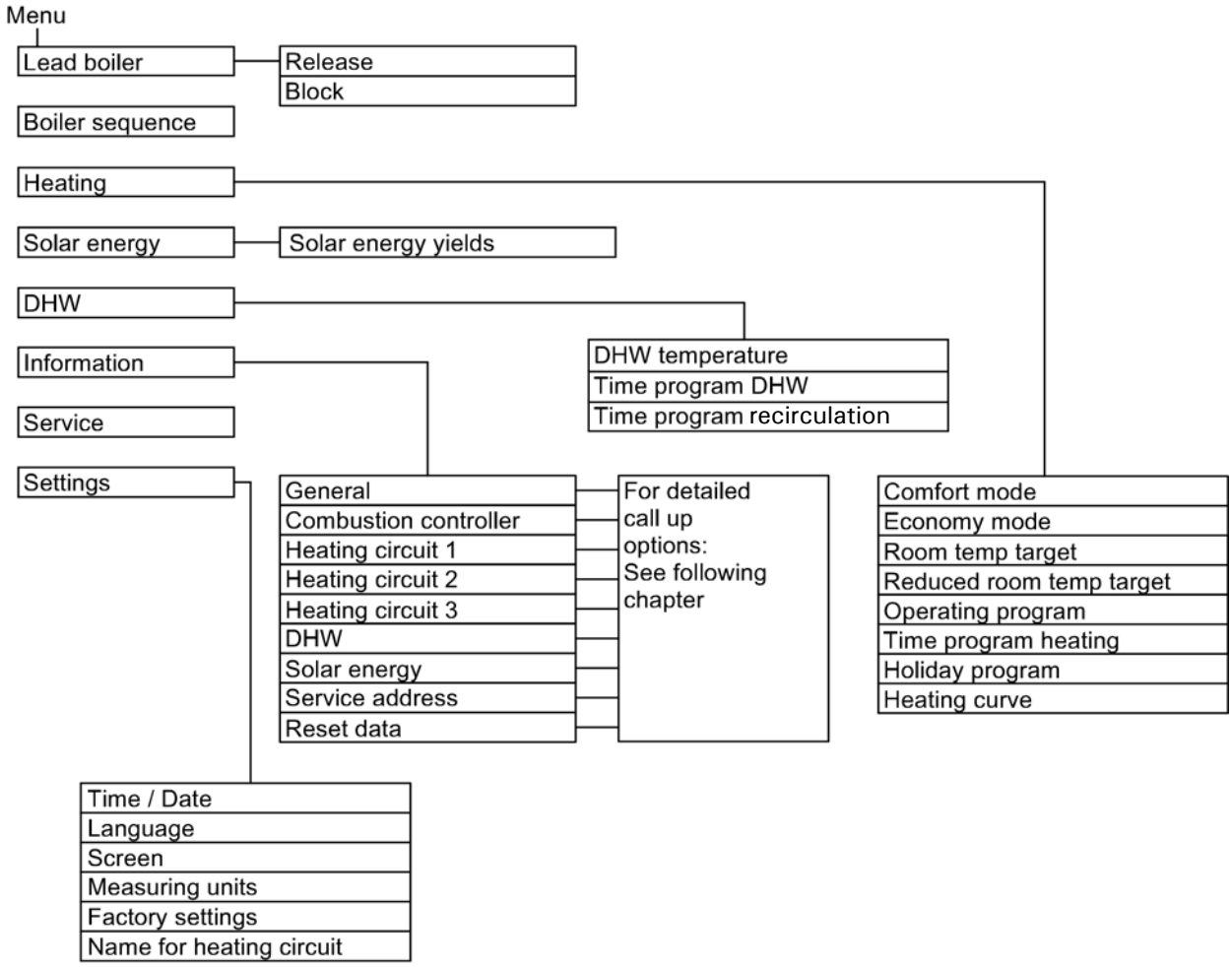
Main Menu Overview

Single boiler system control



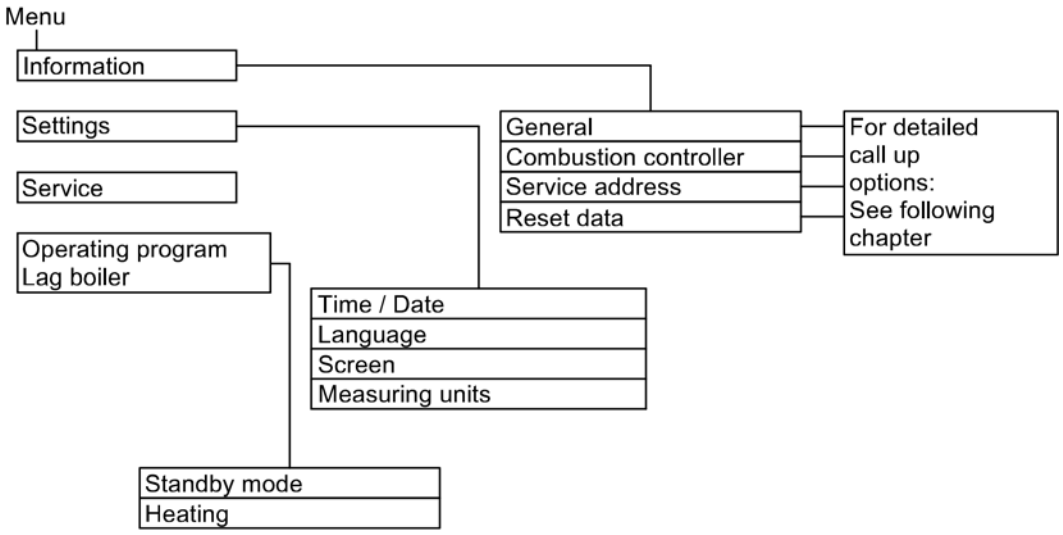
Main Menu Overview *(continued)*

Multi boiler system control
Cascade control unit



Main Menu Overview *(continued)*

Lag boiler control unit



Scanning Options under “Information”

Note: Subject to the actual heating system equipment level, not all of the scans listed here may be available.
You can scan more details on information marked with ▶.

General

“Outdoor temp”
“Boiler temperature”
“Flue gas temperature”
“Burner starts”
“Burner hours”
“Boiler sequence”
“Boiler temperature” “Boiler ...”
“Sensor 17A”
“Sensor 17B”
“Common supply temp”/”Common demand temp.”
“Sensor 9”
“Output 20”
“Output 29”
“Output 52”
“Feed pump”
“Central fault mess”
“Participant no.”
"Integral"
“Input ext. EA1”▶
“Ext. hook-up 0...10V”
“Time”
“Date”

Combustion controller [Burner control unit]

"Burner hours"
"Burner starts"
"Max operational output"
"Gas type"
"Altitude"
"Max boiler temperature"
"Integral threshold controller"
"Runtime optimization"

DHW

“DHW time prog”▶
“DHW circ time prog”▶
“DHW temperature”
or
In conjunction with 2 DHW tank temperature sensors:
“DHW temp top”
“DHW temp bottom”
“DHW circ pump”
“Tank primary pump”

Heating circuit 1, 2, 3

“Heating program”▶ - "Slab curing" - "External hook-up" - "Holiday program" - "External program" - "Comfort mode" - "Economy mode" - "Heating and DHW" - "DHW only" - "Standby mode"
“Operating status:”▶ - “Standard heating mode” - “Reduced mode” - “Standby mode”
“Time program”▶
“Room temperature”
“Room temp target”
“Reduced room temp target”
“Set ext. room temp”
“Comfort temp target”
“Slope”
“Shift”
“Heating circ pump”
"Mixing valve"
"Supply temperature / Supply temperature"
“Holiday program”▶

Solar

“Solar energy history”▶
“Collector temp”
“Solar DHW”
“Solar circuit pump” (hours run)
“Solar energy”
“Solar circuit pump” (ON/OFF) or
“Solar pump circ speed”
“Heating suppr. DHW”
“SM1 output 22” (ON/OFF)
“SM1 output 22” (hours run)
“Sensor 7”
“Sensor 10”
“Heat suppr. heating”

Terminology

Setback mode (reduced heating mode)

See “Reduced heating mode”.

Operating program

You define the following with the operating program:

- Central heating and DHW heating
  or
- Only DHW, no central heating
  or
- Only frost protection for the boiler and the DHW tank is active. No central heating, no DHW heating

Note: No operating program is available for central heating without DHW heating. When you want central heating, hot water is generally also required (winter mode).

Operating status

In the operating program “Heating and DHW”, the operating status changes from “Standard heating mode” to “Reduced heating mode” and vice versa. The times at which the operating status is changed over are defined by you when setting the time program.

Extension kit for heating circuit with mixing valve

Assembly (accessory) for controlling a heating circuit with mixing valve. See “Mixing valve”.

Slab curing

This is an accessory heating program with a fixed time/temperature profile, that must be selected based on building materials used. The slab curing function affects heating circuits with mixing valve:

- All rooms are heated according to the temperature/time profile. Your settings for central heating have no effect for the duration of slab curing (max. 32 days).
- DHW heating is carried out (but priority control is cancelled).

Underfloor heating

Underfloor heating systems are slow, low temperature heating systems and only respond very slowly to short term temperature changes.
Therefore, heating to the reduced room temperature at night and enabling “Economy mode” during short absences do not result in significant energy savings.

Standard heating mode

For periods when you will be at home during the day, heat your rooms to the standard room temperature.
Set the periods (time phases) using the time program for central heating.

Reduced heating mode

For periods when you will be absent or during the night, heat your rooms to the reduced room temperature.
Set the periods using the time program for central heating. With underfloor heating systems, reduced heating mode only yields limited energy savings (see “Underfloor heating system”).

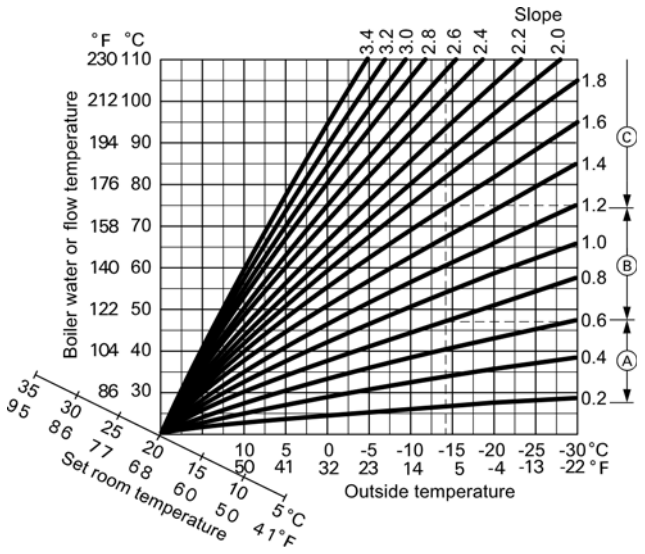
Room temperature-dependent heating mode

In room temperature-dependent mode, the supply temperature is controlled according to the room temperature.
More heat is made available at a lower room temperature than at a higher one. The room temperature is captured and transmitted to the control unit by a sensor.
The sensor is fitted in the room. The supply temperature is regulated independently of the outdoor temperature.

Weather-compensated heating mode

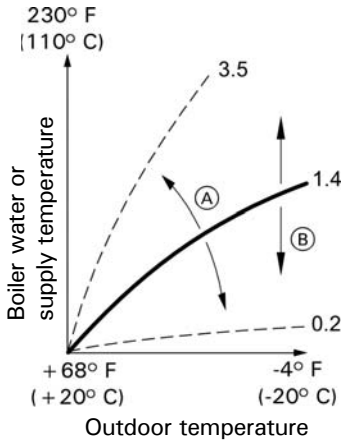
In weather-compensated mode, the supply temperature is controlled according to the outdoor temperature. More heat is made available at a lower outdoor temperature than at a higher one. The outdoor temperature is captured and transmitted to the control unit by a sensor.
The sensor is fitted to the exterior of the building.

Terminology *(continued)*



Example:
For outdoor temperature −14°C:
Ⓐ Underfloor heating system, slope 0.2 to 0.8
Ⓑ Low temperature heating system, slope 0.8 to 1.6
Ⓒ Heating system with a boiler water temperature in excess of 75°C, slope 1.6 to 2.0

Factory settings: Slope = 1.4 and shift = 0.



Legend
Ⓐ Changing the slope:
The gradient of the heating curves changes.
Ⓑ Changing the shift:
The heating curves are shifted in parallel in a vertical direction.
Ⓒ Changing the standard room temperature (set value):
The heating curves are offset along the "Set room temperature" axis.

Heating curve
Heating curves illustrate the relationship between the outdoor temperature, the set room temperature and the boiler water temperature or supply temperature.
The lower the outdoor temperature, the higher the boiler water temperature or supply temperature.
In order to guarantee sufficient heat and minimum fuel consumption at any outdoor temperature, the conditions of your building and your heating system must be taken into consideration. The heating curve is set by your heating contractor for this purpose.
The illustrated heating curves apply with the following settings:
- Heating curve shift = 0
- Standard room temperature (set value) = 68°F (20°C)

Heating circuit
A heating circuit is a sealed unvented circuit between the boiler and radiators, in which the heating water circulates. A heating system may comprise several heating circuits. For example, one heating circuit for the rooms occupied by you and one heating circuit for the rooms of a separate apartment.

Heating circuit pump
Circulation pump for circulating the heating water in the heating circuit

Mixing valve
Hot heating water from the boiler is mixed with cooled heating water from the heating circuit. The heating water, brought to the right temperature as required, is pumped to the heating circuit by the heating circuit pump. The control unit adjusts the supply temperature via the mixing valve to suit different conditions, e.g. changing outdoor temperatures.

Night setback
See “Reduced heating mode”

Open flue operation
The combustion air is drawn from the room where the boiler is installed.

Room sealed operation
The combustion air is drawn from outside the building.

Room temperature
- Standard room temperature:
  For periods when you will be at home during the day, select the standard room temperature.
- Reduced room temperature:
  For periods when you will be absent or during the night, set the reduced room temperature; see “Heating mode”.

Terminology *(continued)*

Safety valve
A safety device that must be installed in the cold water pipe by your heating contractor.
The safety valve opens automatically to prevent excess pressure in the DHW tank.

Solar circuit pump
In conjunction with solar thermal systems. The solar circuit pump delivers the cooled heat transfer medium from the indirect coil of the DHW tank to the solar collectors.

Set temperature
Default temperature that should be reached, e.g. set DHW temperature.

Summer mode
Operating program “DHW only”. In warmer months, you can switch off heating mode. The boiler remains operational for DHW heating. Central heating is switched off.

Tank loading pump
Circulation pump for heating the potable water inside the DHW tank

Drinking water filter
A device that removes solids from the water.
The drinking water filter is installed in the cold water pipe upstream of the DHW tank or the instantaneous water heater.

Weather-compensated mode
See “Heating mode”

Time program
In the time programs, you specify what your heating system should do at which time.

DHW recirculation pump
The DHW recirculation pump transports the DHW around a ring pipeline between the DHW tank and the draw-off points (e.g. hot tap). This ensures that hot water is rapidly available at the draw-off point.

Quick Reference

°C	°F
-40	-40
-35	-31
-25	-13
-20	-4
-18	0
-16	+3
-14	+7
-12	+10
-10	+14
-9	+16
-8	+18
-7	+19
-6	+21
-5	+23
-4	+25
-3	+27
-2	+28
-1	+30
0	+32
+1	+34
+2	+36
+3	+37
+4	+39
+5	+41
+6	+43
+7	+45
+8	+46
+9	+48
+10	+50
+12	+54
+14	+57
+16	+61
+18	+64
+20	+68
+25	+77
+30	+86
+35	+95
+40	+104
+50	+122
+60	+140
+70	+158
+80	+176
+90	+194
+100	+212
+110	+230

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